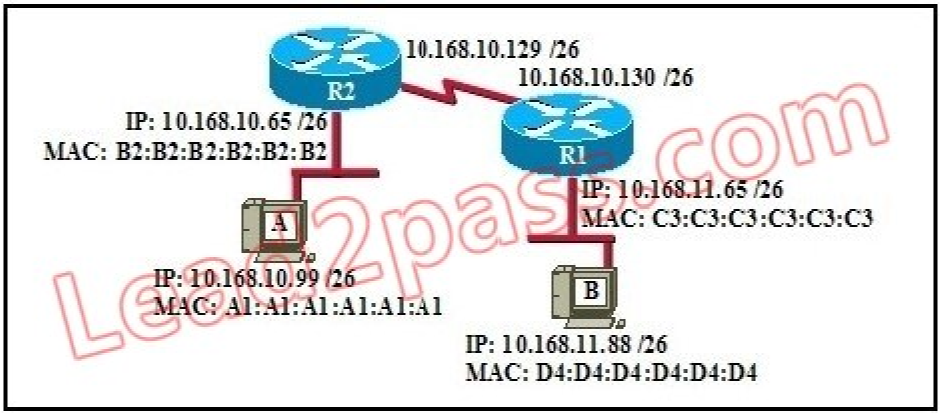
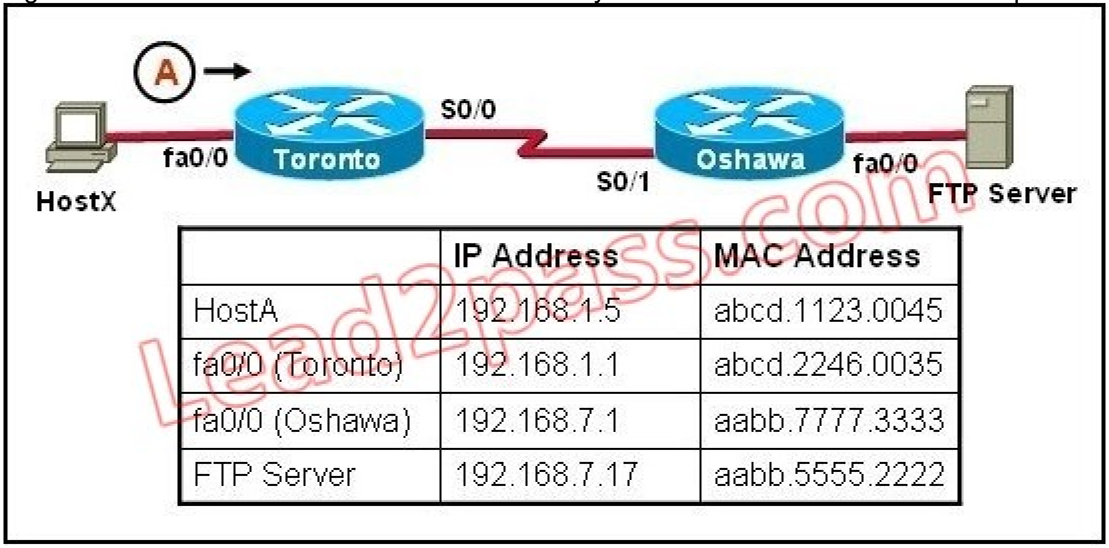
QUESTION 81
Refer to the exhibit. If host A sends an IP packet to host B, what will the source physical address be in the frame when it reaches host B?



A. 10.168.10.99
B. 10.168.11.88
C. A1:A1:A1:A1:A1:A1
D. B2:B2:B2:B2:B2:B2
E. C3:C3:C3:C3:C3:C3
F. D4:D4:D4:D4:D4:D4

Answer: E
Explanation:
When packets transfer from one host to another across a routed segment, the source IP address always remains the same source IP address, and the source physical (MAC) address will be the existing router's interface address. Similarly, the destination IP address always remains the same and the destination physical (MAC) address is the destination router's interface address.

QUESTION 82
Refer to the exhibit. HostX is transferring a file to the FTP server. Point A represents the frame as it goes toward the Toronto router. What will the Layer 2 destination address be at this point?



	IP Address	MAC Address
HostA	192.168.1.5	abcd.1123.0045
fa0/0 (Toronto)	192.168.1.1	abcd.2246.0035
fa0/0 (Oshawa)	192.168.7.1	aabb.7777.3333
FTP Server	192.168.7.17	aabb.5555.2222

A. abcd.1123.0045

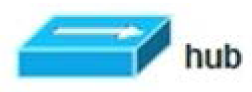
B. 192.168.7.17
C. aabb.5555.2222
D. 192.168.1.1
E. abcd.2246.0035

Answer: E
Explanation:
For packets destined to a host on another IP network, the destination MAC address will be the LAN interface of the router. Since the FTP server lies on a different network, the host will know to send the frame to its default gateway, which is Toronto.

QUESTION 83
Which network device functions only at Layer 1 of the OSI model?

A.

B.



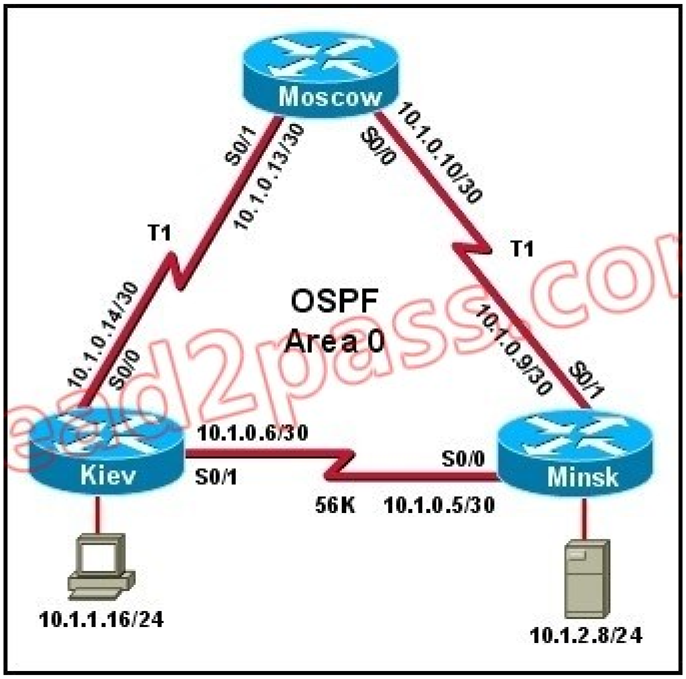
C.

D.

E.

Answer: C
Explanation:
Most hubs are amplifying the electrical signal; therefore, they are really repeaters with several ports. Hubs and repeaters are Layer 1 (physical layer) devices.

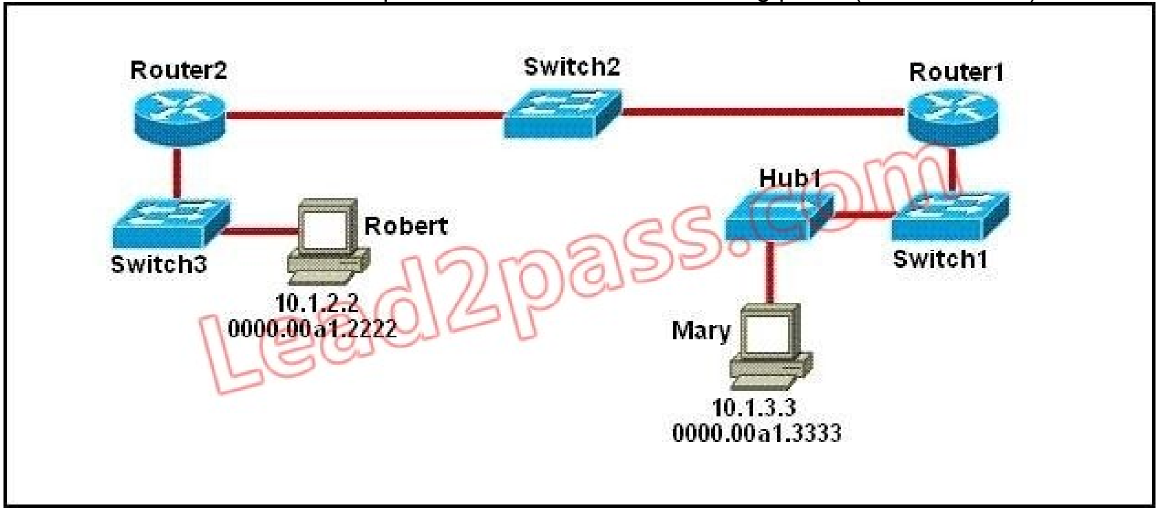
QUESTION 84
Refer to the exhibit. The host in Kiev sends a request for an HTML document to the server in Minsk. What will be the source IP address of the packet as it leaves the Kiev router?



A. 10.1.0.1
B. 10.1.0.5
C. 10.1.0.6
D. 10.1.0.14
E. 10.1.1.16
F. 10.1.2.8

Answer: E
Explanation:
Although the source and destination MAC address will change as a packet traverses a network, the source and destination IP address will not unless network address translation (NAT) is being done, which is not the case here.

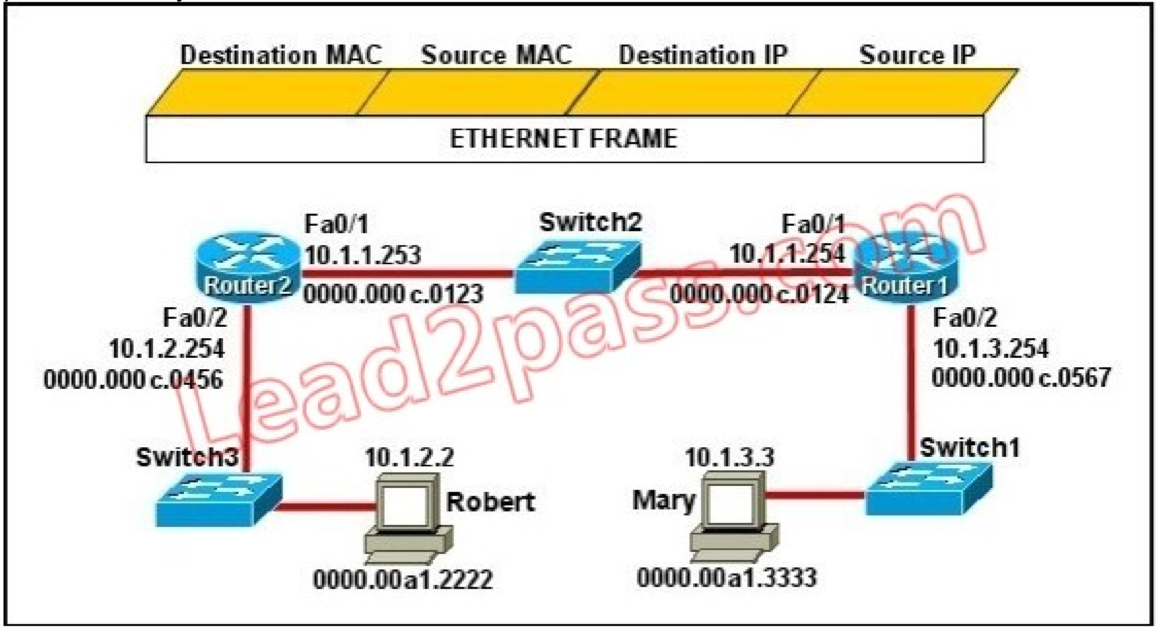
QUESTION 85
Refer to the exhibit. As packets travel from Mary to Robert, which three devices will use the destination MAC address of the packet to determine a forwarding path? (Choose three.)



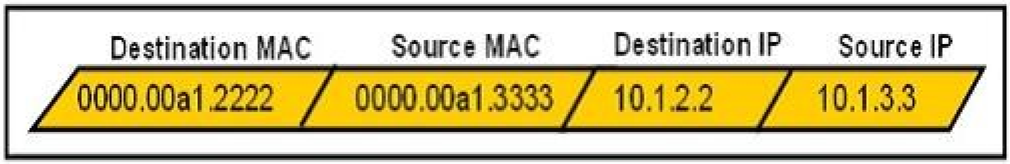
A. Hub1
B. Switch1
C. Router1
D. Switch2
E. Router2
F. Switch3

Answer: BDF
Explanation:
Switches use the destination MAC address information for forwarding traffic, while routers use the destination IP address information. Local Area Networks employ Layer 2 Switches and Bridges to forward and filter network traffic. Switches and Bridges operate at the Data Link Layer of the Open System Interconnect Model (OSI). Since Switches and Bridges operate at the Layer 2 they operate more intelligently than hubs, which work at Layer 1 (Physical Layer) of the OSI. Because the switches and bridges are able to listen to the traffic on the wire to examine the source and destination MAC address. Being able to listen to the traffic also allows the switches and bridges to compile a MAC address table to better filter and forward network traffic. To accomplish the above functions switches and bridges carry out the following tasks:
MAC address learning by a switch or a bridge is accomplished by the same method. The switch or bridge listens to each device connected to each of its ports and scan the incoming frame for the source MAC address. This creates a MAC address to port map that is cataloged in the switches/bridge MAC database. Another name for the MAC address table is content addressable memory orCAM table. When a switch or bridge is listening o the network traffic, it receives each frame and compares it to the MAC address table. By checking the MAC table the switch/ bridge are able o determine which port the frame came in on. If the frame is on the MAC table the frame is filtered or transmitted on only that port. If the switch determines that the frame is not on the MAC table, the frame is forwarded out to all ports except the incoming port.

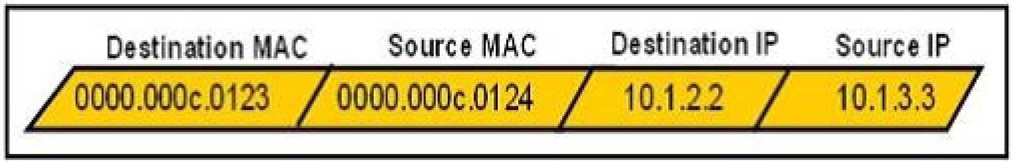
QUESTION 86
Refer to the exhibit. Mary is sending an instant message to Robert. The message will be broken into a series of packets that will traverse all network devices. What addresses will populate these packets as they are forwarded from Router1 to Router2?



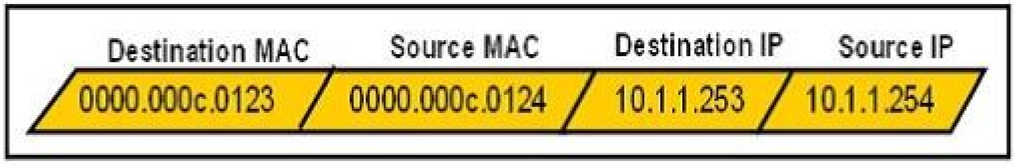
A.



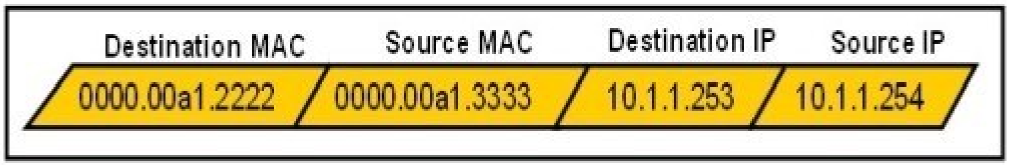
B.



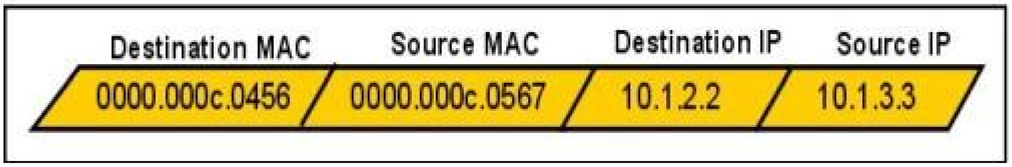
C.



D.

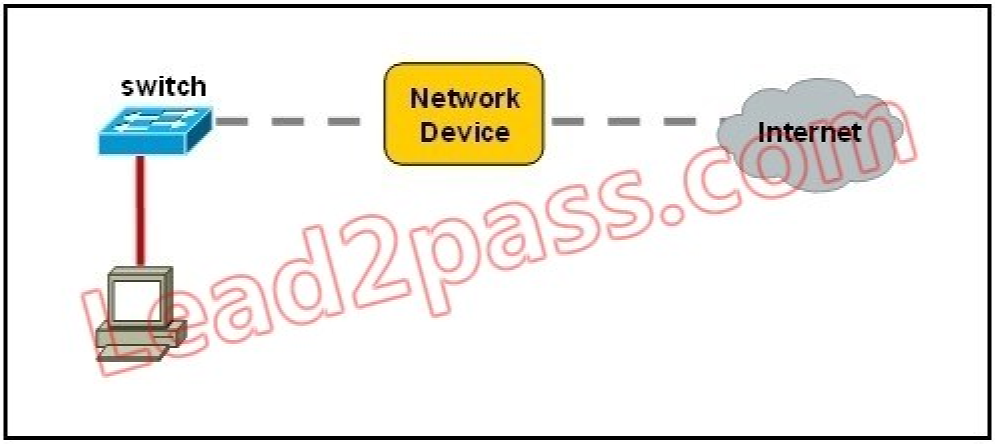


E.



Answer: B
Explanation:
The Source and Destination IP address is not going to change. Host 1 IP address will stay as being the source IP and the Host 2 IP address will stay the destination IP address. Those two are not going to change. For the MAC address it is going to change each time it goes from one hope to another. (Except switches... they don't change anything) Frame leaving HOST 1 is going to have a source MAC of Host 1 and a destination MAC of Router1.
Router 1 is going to strip that info off and then will make the source MAC address of Router1's exiting interface, and making Router2's interface as the destination MAC address.
Then the same will happen... Router2 is going to change the source/destination info to the source MAC being the Router2 interface that it is going out, and the destination will be Host2's MAC address.

QUESTION 87
Refer to the exhibit. A network device needs to be installed in the place of the icon labeled Network Device to accommodate a leased line attachment to the Internet. Which network device and interface configuration meets the minimum requirements for this installation?



Lead2pass.com

A. a router with two Ethernet interfaces
B. a switch with two Ethernet interfaces
C. a router with one Ethernet and one serial interface
D. a switch with one Ethernet and one serial interface
E. a router with one Ethernet and one modem interface

Answer: C
Explanation:
Only a router can terminate a leased line attachment access circuit, and only a router can connect two different IP networks. Here, we will need a router with two interfaces, one serial connection for the line attachment and one Ethernet interface to connect to the switch on the LAN.

QUESTION 88
Which transport layer protocol provides best-effort delivery service with no acknowledgment receipt required?

A. HTTP
B. IP
C. TCP
D. Telnet
E. UDP

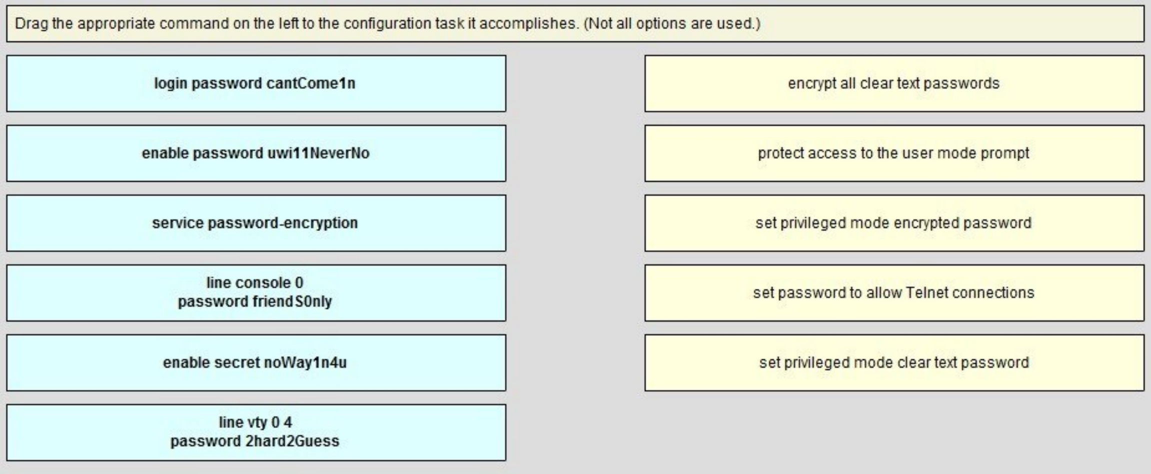
Answer: E
Explanation:
UDP provides a connectionless datagram service that offers best-effort delivery, which means that UDP does not guarantee delivery or verify sequencing for any datagrams. A source host that needs reliable communication must use either TCP or a program that provides its own sequencing and acknowledgment services.

QUESTION 89
Which layer of the OSI model controls the reliability of communications between network devices using flow control, sequencing and acknowledgments?

A. Physical
B. Data-link
C. Transport
D. Network

Answer: C
Explanation:
There are many services that can be optionally provided by a transport-layer protocol, and different protocols may or may not implement them. Connection-oriented communication: It is normally easier for an application to interpret a connection as a data stream rather than having to deal with the underlying connection-less models, such as the datagram model of the User Datagram Protocol (UDP) and of the Internet Protocol (IP). Byte orientation:
Rather than processing the messages in the underlying communication system format, it is often easier for an application to process the data stream as a sequence of bytes. This simplification helps applications work with various underlying message formats. Same order delivery: The network layer doesn't generally guarantee that packets of data will arrive in the same order that they were sent, but often this is a desirable feature. This is usually done through the use of segment numbering, with the receiver passing them to the application in order. This can cause head-of-line blocking. Reliability: Packets may be lost during transport due to network congestion and errors. By means of an error detection code, such as a checksum, the transport protocol may check that the data is not corrupted, and verify correct receipt by sending an ACK or NACK message to the sender. Automatic repeat request schemes may be used to retransmit lost or corrupted data.
Flow control: The rate of data transmission between two nodes must sometimes be managed to prevent a fast sender from transmitting more data than can be supported by the receiving data buffer, causing a buffer overrun. This can also be used to improve efficiency by reducing buffer underrun. Congestion avoidance: Congestion control can control traffic entry into a telecommunications network, so as to avoid congestive collapse by attempting to avoid oversubscription of any of the processing or link capabilities of the intermediate nodes and networks and taking resource reducing steps, such as reducing the rate of sending packets. For example, automatic repeat requests may keep the network in a congested state; this situation can be avoided by adding congestion avoidance to the flow control, including slow-start. This keeps the bandwidth consumption at a low level in the beginning of the transmission, or after packet retransmission. Multiplexing: Ports can provide multiple endpoints on a single node. For example, the name on a postal address is a kind of multiplexing, and distinguishes between different recipients of the same location. Computer applications will each listen for information on their own ports, which enables the use of more than one network service at the same time. It is part of the transport layer in the TCP/IP model, but of the session layer in the OSI model.

QUESTION 90
Drag and Drop Question

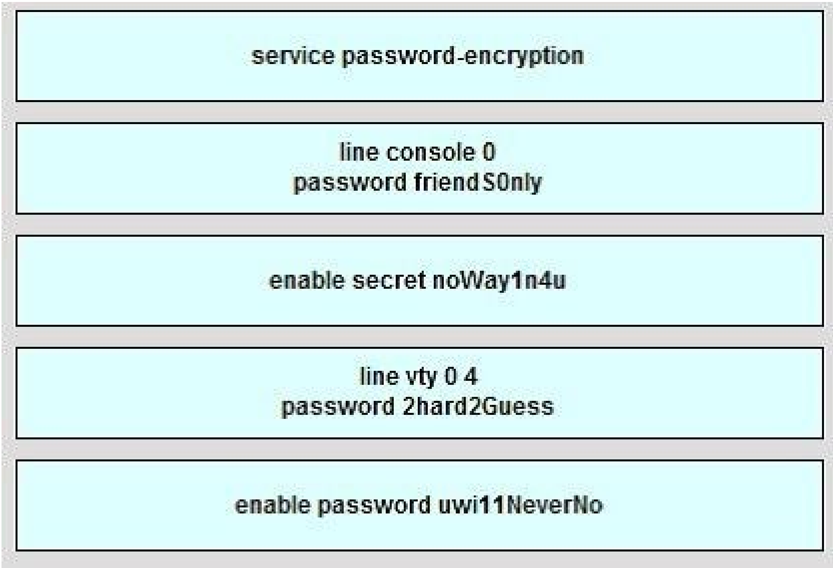


Drag the appropriate command on the left to the configuration task it accomplishes. (Not all options are used.)

- login password cantCome1n
- enable password uwi11NeverNo
- service password-encryption
- line console 0
password friendS0nly
- enable secret noWay1n4u
- line vty 0 4
password 2hard2Guess

- encrypt all clear text passwords
- protect access to the user mode prompt
- set privileged mode encrypted password
- set password to allow Telnet connections
- set privileged mode clear text password

Answer:


service password-encryption

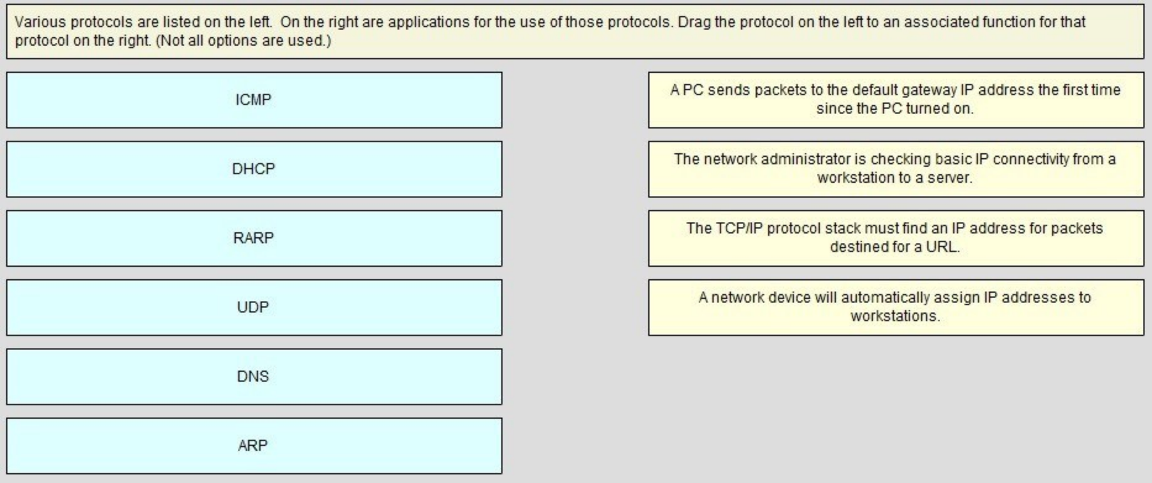
line console 0
password friend S0nly

enable secret noWay1n4u

line vty 0 4
password 2hard2Guess

enable password uwi11NeverNo

QUESTION 91
Drag and Drop Question


Various protocols are listed on the left. On the right are applications for the use of those protocols. Drag the protocol on the left to an associated function for that protocol on the right. (Not all options are used.)

ICMP

DHCP

RARP

UDP

DNS

ARP

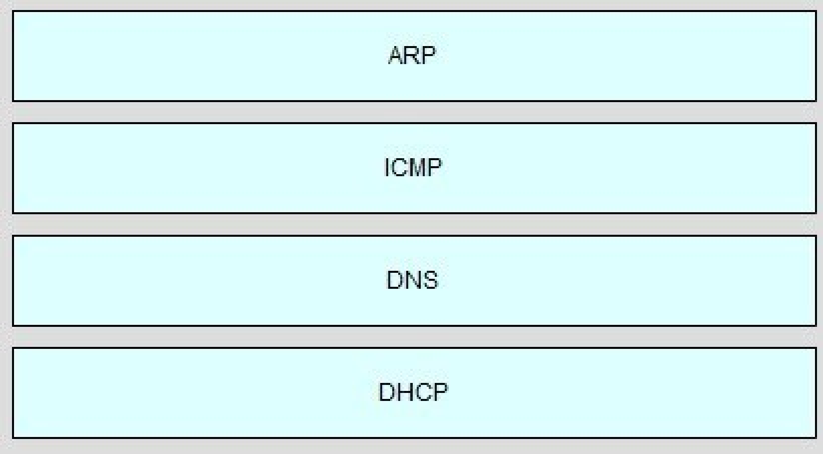
A PC sends packets to the default gateway IP address the first time since the PC turned on.

The network administrator is checking basic IP connectivity from a workstation to a server.

The TCP/IP protocol stack must find an IP address for packets destined for a URL.

A network device will automatically assign IP addresses to workstations.

Answer:

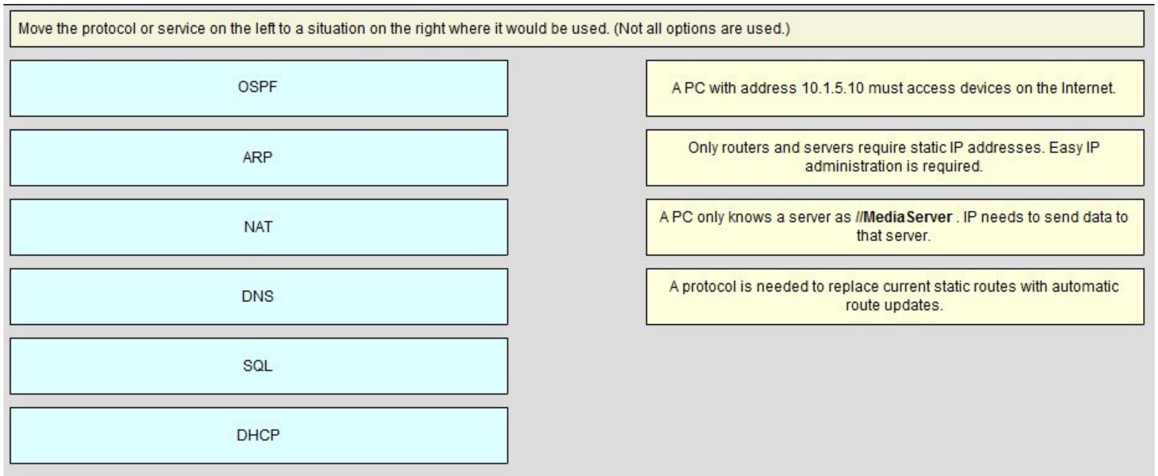

ARP

ICMP

DNS

DHCP

QUESTION 92
Drag and Drop Question



Move the protocol or service on the left to a situation on the right where it would be used. (Not all options are used.)

OSPF

ARP

NAT

DNS

SQL

DHCP

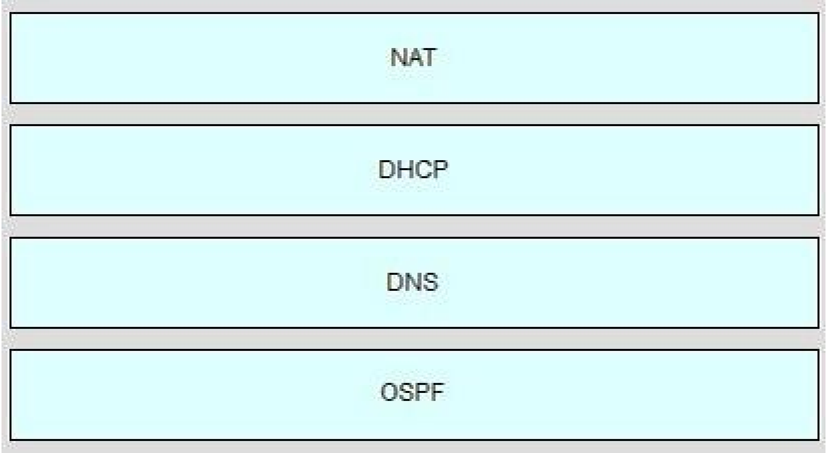
A PC with address 10.1.5.10 must access devices on the Internet.

Only routers and servers require static IP addresses. Easy IP administration is required.

A PC only knows a server as //**MediaServer** . IP needs to send data to that server.

A protocol is needed to replace current static routes with automatic route updates.

Answer:



NAT

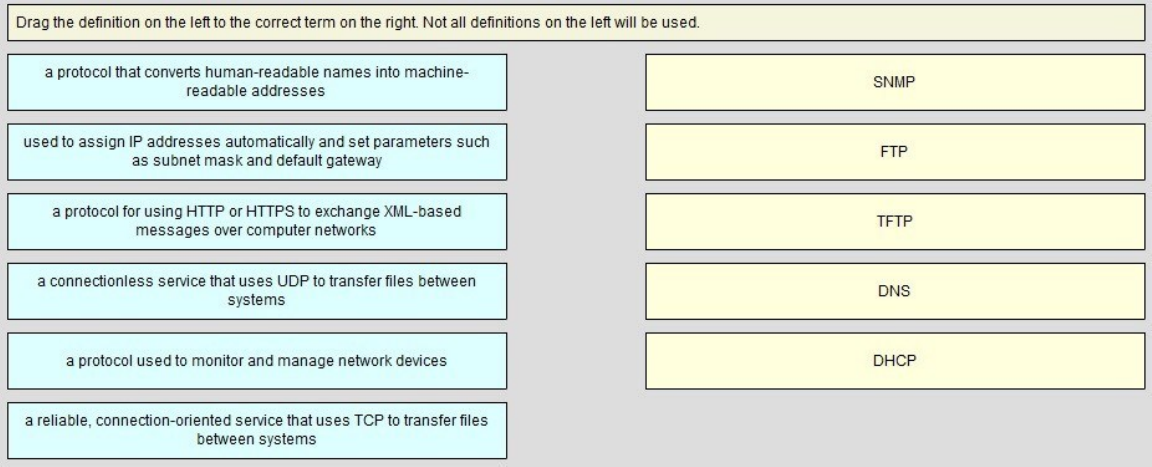
DHCP

DNS

OSPF

QUESTION 93

Drag and Drop Question



Drag the definition on the left to the correct term on the right. Not all definitions on the left will be used.

a protocol that converts human-readable names into machine-readable addresses

used to assign IP addresses automatically and set parameters such as subnet mask and default gateway

a protocol for using HTTP or HTTPS to exchange XML-based messages over computer networks

a connectionless service that uses UDP to transfer files between systems

a protocol used to monitor and manage network devices

a reliable, connection-oriented service that uses TCP to transfer files between systems

SNMP

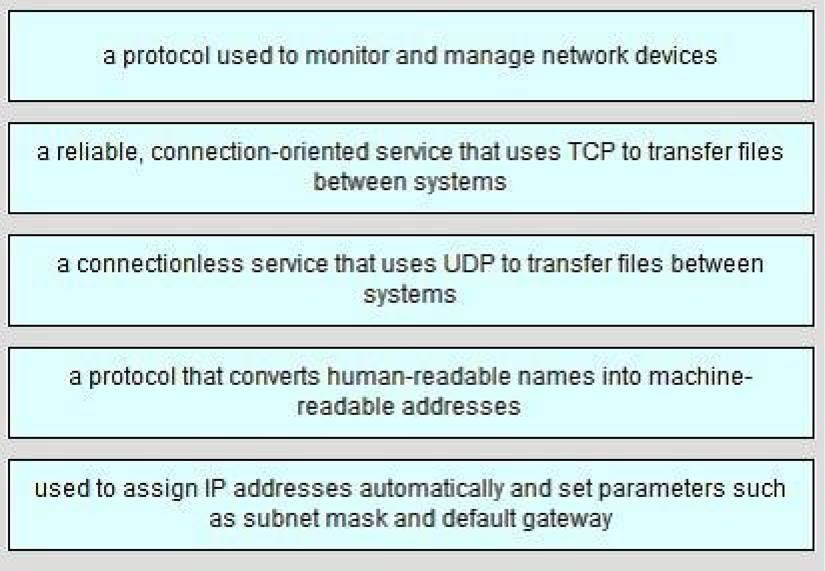
FTP

TFTP

DNS

DHCP

Answer:



a protocol used to monitor and manage network devices

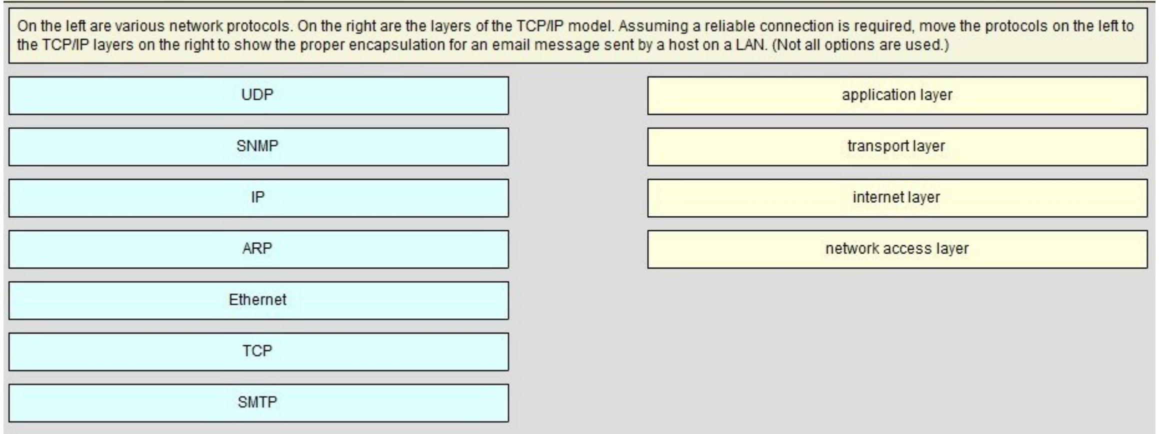
a reliable, connection-oriented service that uses TCP to transfer files between systems

a connectionless service that uses UDP to transfer files between systems

a protocol that converts human-readable names into machine-readable addresses

used to assign IP addresses automatically and set parameters such as subnet mask and default gateway

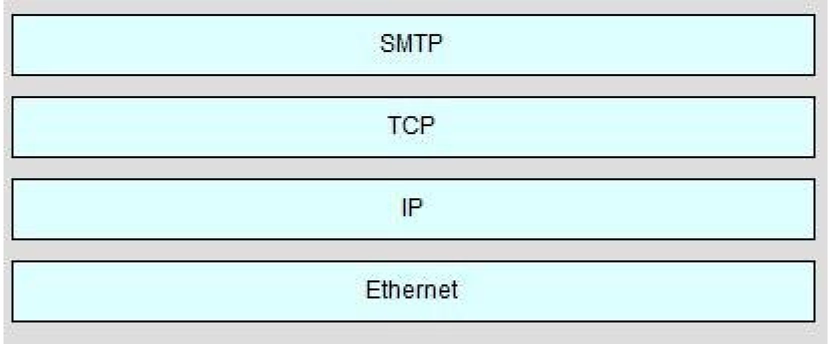
QUESTION 94
Drag and Drop Question



On the left are various network protocols. On the right are the layers of the TCP/IP model. Assuming a reliable connection is required, move the protocols on the left to the TCP/IP layers on the right to show the proper encapsulation for an email message sent by a host on a LAN. (Not all options are used.)

UDP	application layer
SNMP	transport layer
IP	internet layer
ARP	network access layer
Ethernet	
TCP	
SMTP	

Answer:



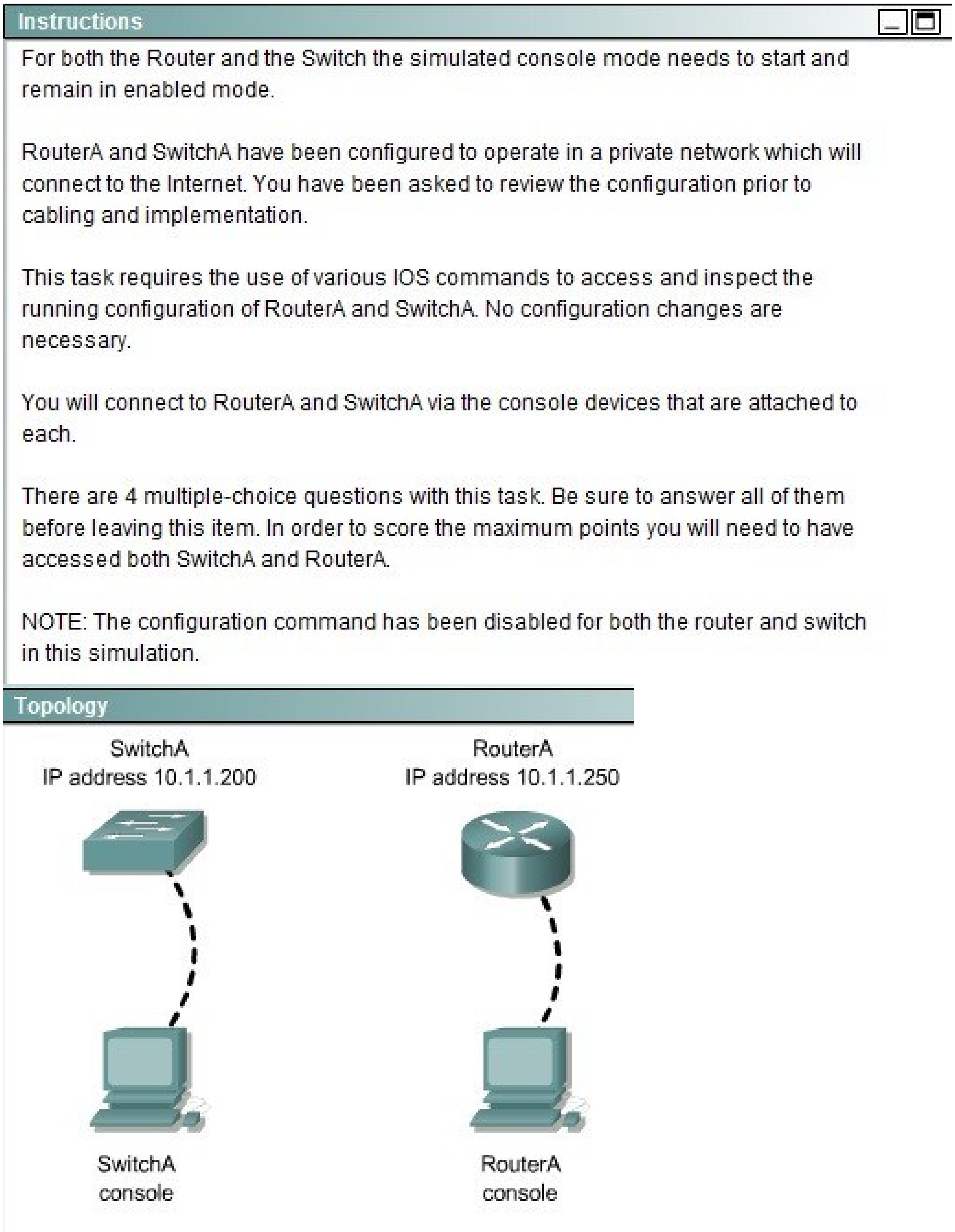
SMTP

TCP

IP

Ethernet

QUESTION 95
Hotspot Questions



For both the Router and the Switch the simulated console mode needs to start and remain in enabled mode.

RouterA and SwitchA have been configured to operate in a private network which will connect to the Internet. You have been asked to review the configuration prior to cabling and implementation.

This task requires the use of various IOS commands to access and inspect the running configuration of RouterA and SwitchA. No configuration changes are necessary.

You will connect to RouterA and SwitchA via the console devices that are attached to each.

There are 4 multiple-choice questions with this task. Be sure to answer all of them before leaving this item. In order to score the maximum points you will need to have accessed both SwitchA and RouterA.

NOTE: The configuration command has been disabled for both the router and switch in this simulation.

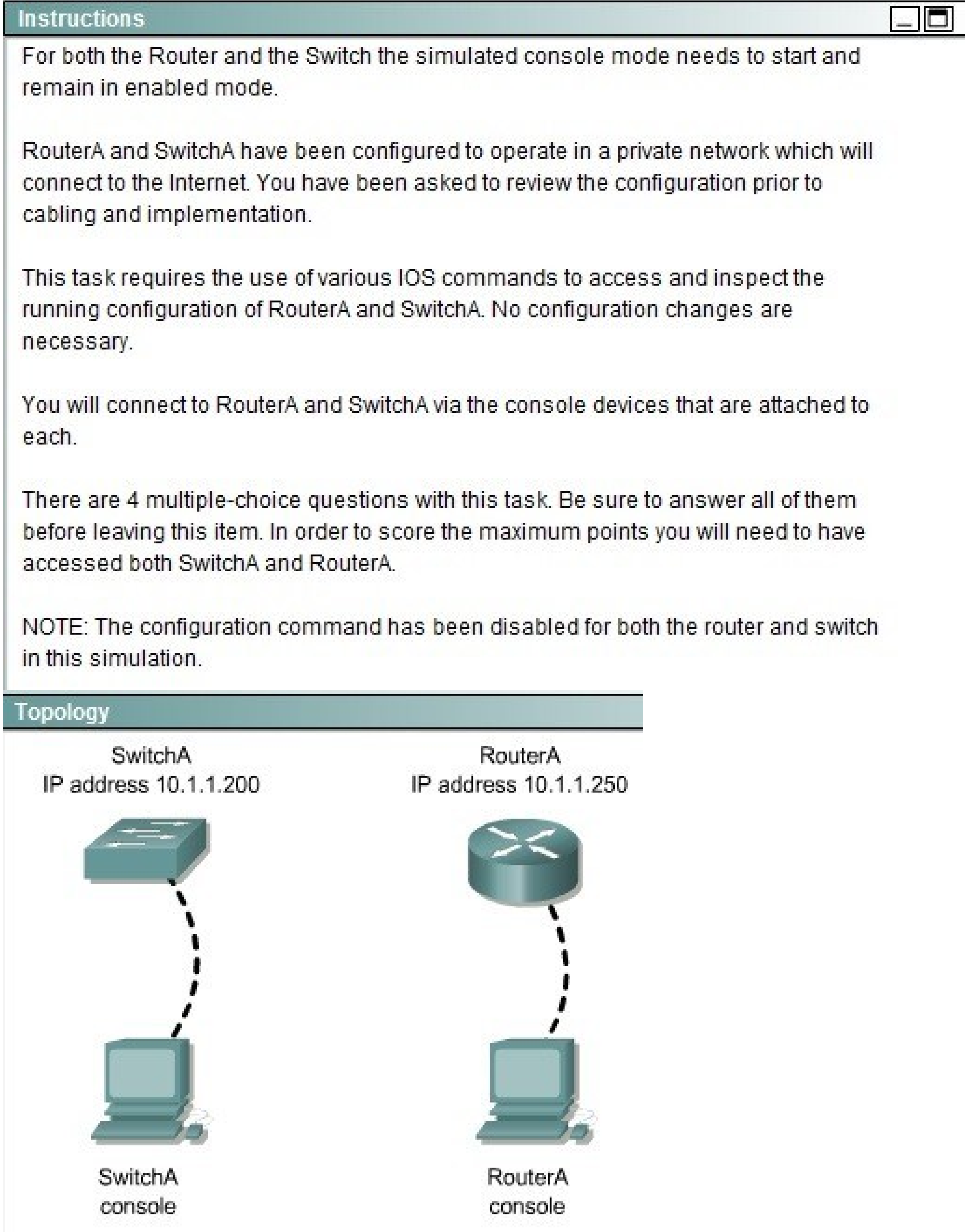
Select two options which are security Issues which need to be modified before RouterA is used? (Choose two.)

A. unencrypted weak password is configured to protect privilege mode
B. inappropriate wording in banner message
C. the virtual terminal lines have a weak password configured
D. virtual terminal lines have a password, but it will not be used
E. configuration supports un-secure web server access

Answer: BD
Explanation:
(This answer can be done by simulation only, don't know user name password and banner

message etc)

QUESTION 96
Hotspot Questions



Instructions

For both the Router and the Switch the simulated console mode needs to start and remain in enabled mode.

RouterA and SwitchA have been configured to operate in a private network which will connect to the Internet. You have been asked to review the configuration prior to cabling and implementation.

This task requires the use of various IOS commands to access and inspect the running configuration of RouterA and SwitchA. No configuration changes are necessary.

You will connect to RouterA and SwitchA via the console devices that are attached to each.

There are 4 multiple-choice questions with this task. Be sure to answer all of them before leaving this item. In order to score the maximum points you will need to have accessed both SwitchA and RouterA.

NOTE: The configuration command has been disabled for both the router and switch in this simulation.

Topology

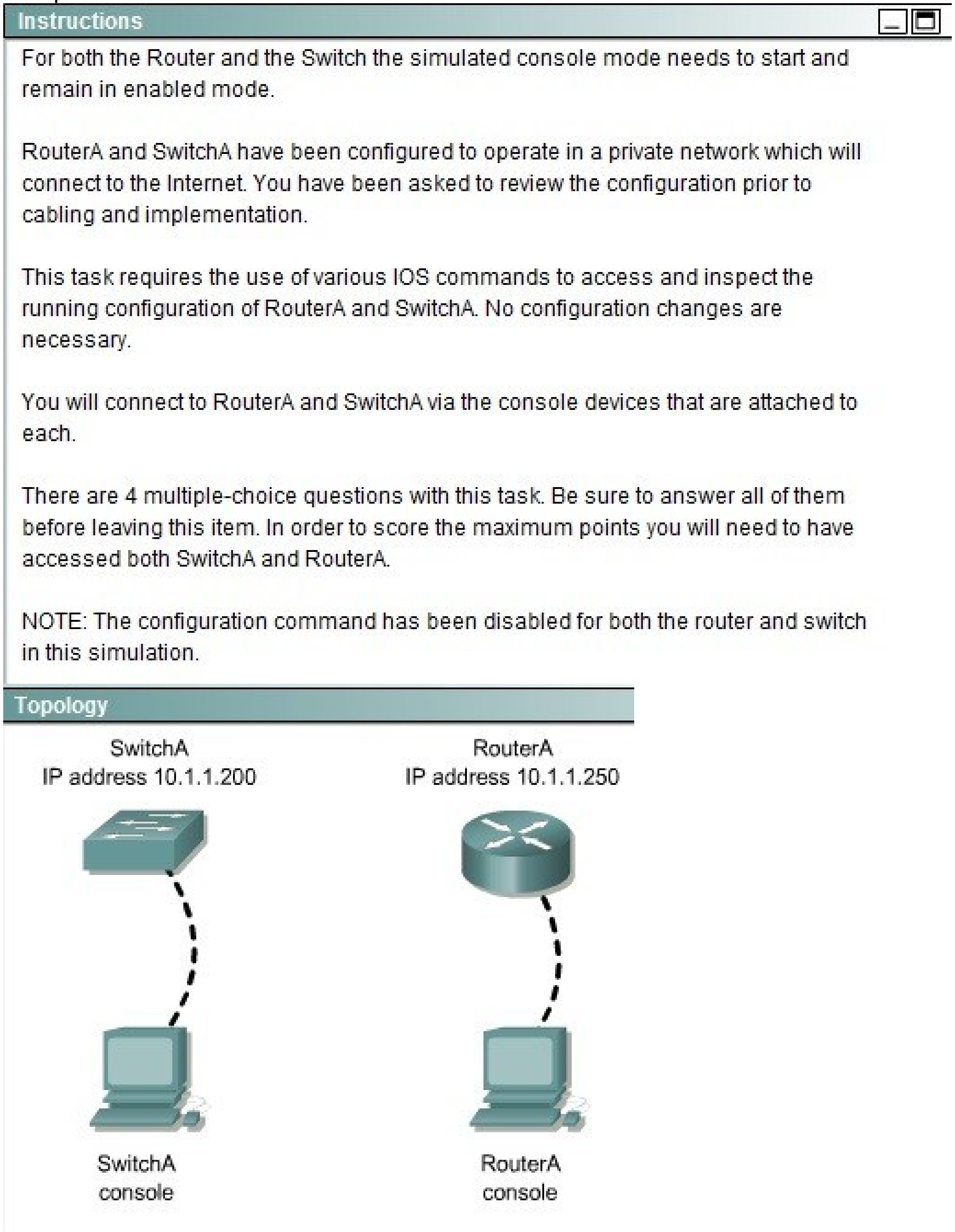
Select three options which are security issues with the current configuration of SwitchA . (Choose three.)

A. privilege mode is protected with an unencrypted password
B. inappropriate wording in banner message
C. virtual terminal lines are protected only by a password requirement
D. both the username and password are weak
E. telnet connections can be used to remotely manage the switch

F. cisco user will be granted privilege level 15 by default

Answer: ABD
Explanation:
(This answer can be done by simulation only, don't know user name password and banner message etc)

QUESTION 97
Hotspot Questions



For both the Router and the Switch the simulated console mode needs to start and remain in enabled mode.

RouterA and SwitchA have been configured to operate in a private network which will connect to the Internet. You have been asked to review the configuration prior to cabling and implementation.

This task requires the use of various IOS commands to access and inspect the running configuration of RouterA and SwitchA. No configuration changes are necessary.

You will connect to RouterA and SwitchA via the console devices that are attached to each.

There are 4 multiple-choice questions with this task. Be sure to answer all of them before leaving this item. In order to score the maximum points you will need to have accessed both SwitchA and RouterA.

NOTE: The configuration command has been disabled for both the router and switch in this simulation.

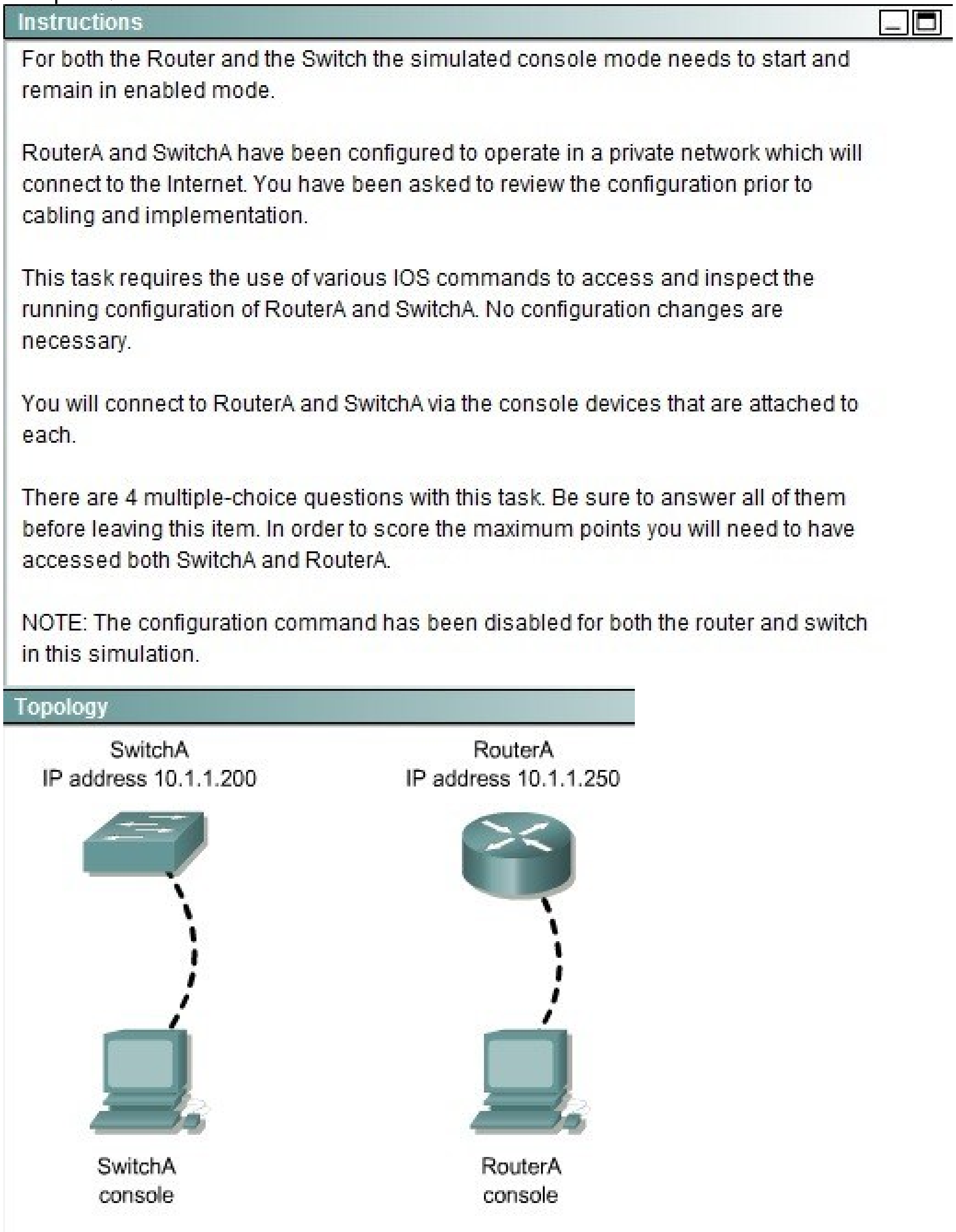
Which two of the following are true regarding the configuration of RouterA? (Choose two.)

A. at least 5 simultaneous remote connections are possible

B. only telnet protocol connections to RouterA are supported
C. remote connections to RouterA using telnet will succeed
D. console line connections will nevertime out due to inactivity
E. since DHCP is not used on FaO/1 there is not a need to use the NAT protocol

Answer: AC
Explanation:
The IP address can accommodate 5 hosts at least, telnet can be accessed on the router

QUESTION 98
Hotspot Questions



For both the Router and the Switch the simulated console mode needs to start and remain in enabled mode.

RouterA and SwitchA have been configured to operate in a private network which will connect to the Internet. You have been asked to review the configuration prior to cabling and implementation.

This task requires the use of various IOS commands to access and inspect the running configuration of RouterA and SwitchA. No configuration changes are necessary.

You will connect to RouterA and SwitchA via the console devices that are attached to each.

There are 4 multiple-choice questions with this task. Be sure to answer all of them before leaving this item. In order to score the maximum points you will need to have accessed both SwitchA and RouterA.

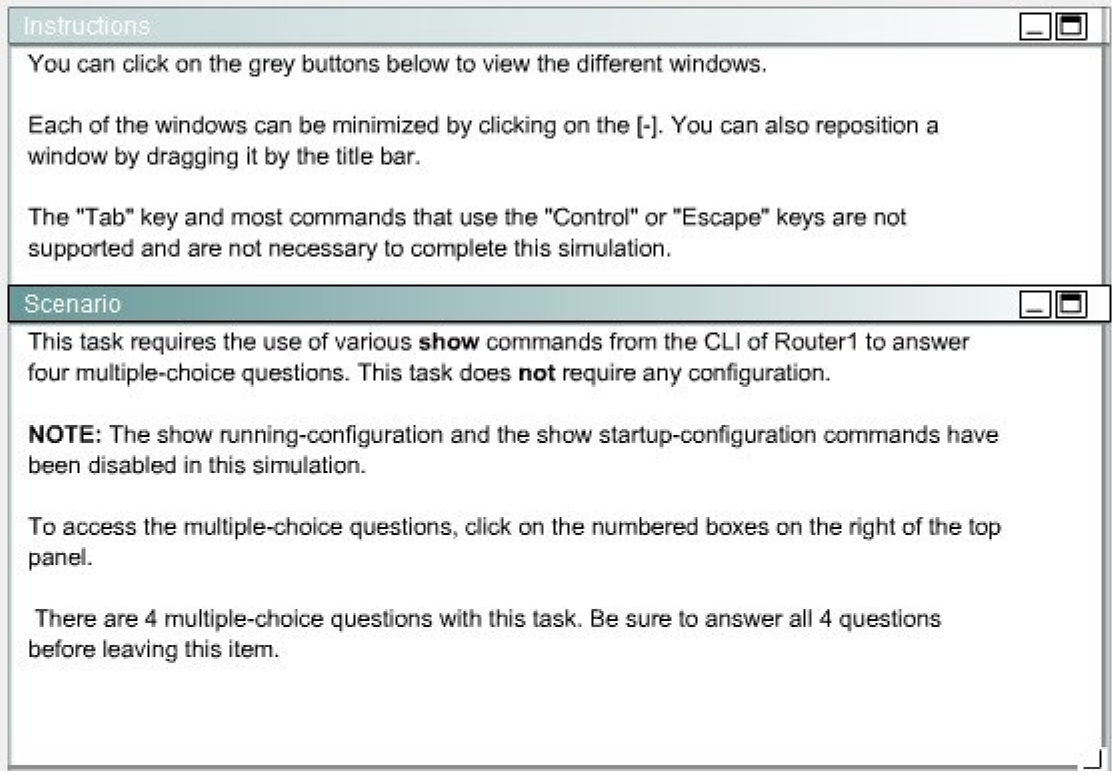
NOTE: The configuration command has been disabled for both the router and switch in this simulation.

Which of the following is true regarding the configuration of SwitchA?

A. only 5 simultaneous remote connections are possible
B. remote connections using ssh will require a username and password
C. only connections from the local network will be possible
D. console access to SwitchA requires a password

Answer: B
Explanation:
Ssh login requires a user name and password always while other conditions may or may not be true.

QUESTION 99
Lab Questions



You can click on the grey buttons below to view the different windows.

Each of the windows can be minimized by clicking on the [-]. You can also reposition a window by dragging it by the title bar.

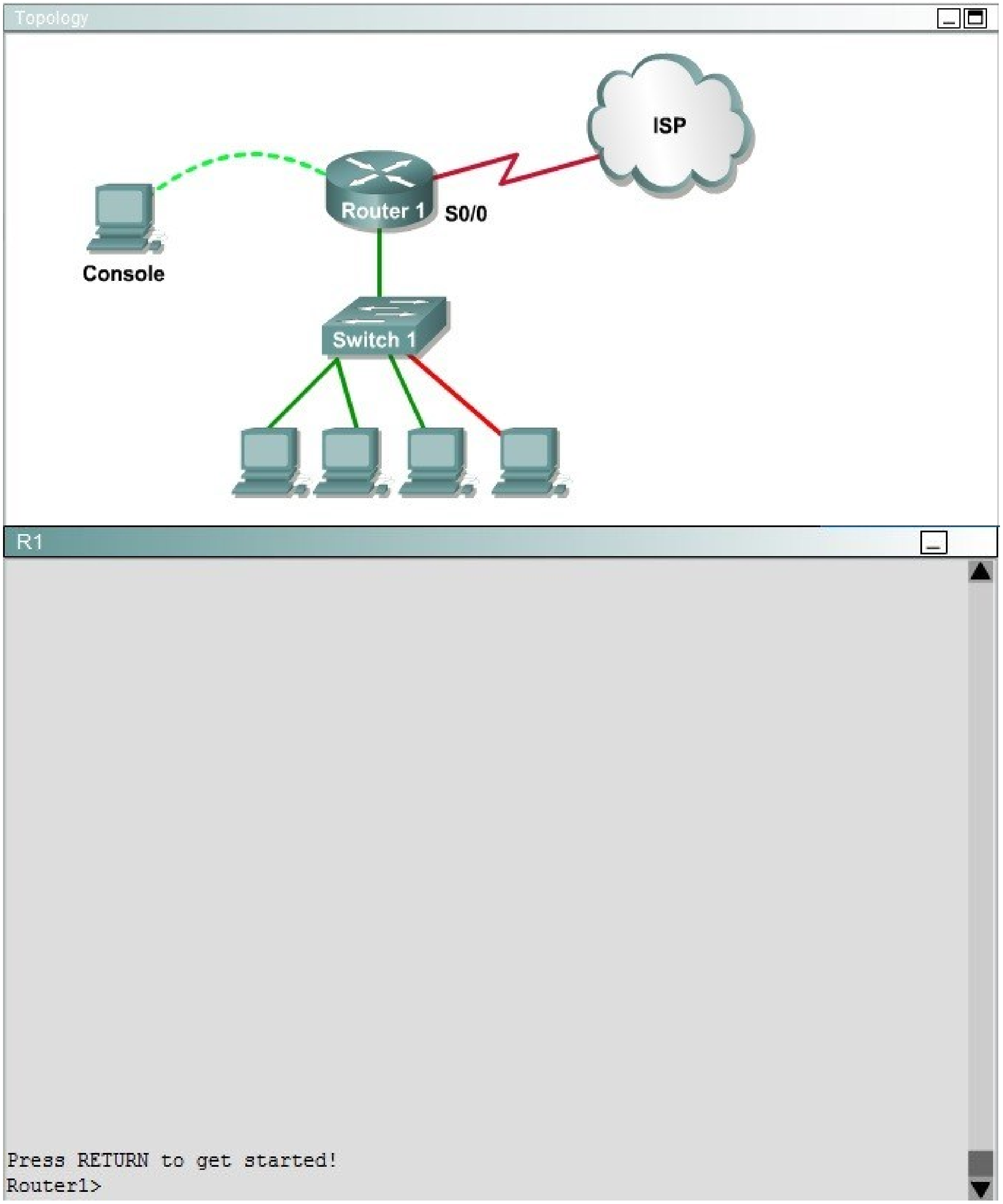
The "Tab" key and most commands that use the "Control" or "Escape" keys are not supported and are not necessary to complete this simulation.

This task requires the use of various **show** commands from the CLI of Router1 to answer four multiple-choice questions. This task does **not** require any configuration.

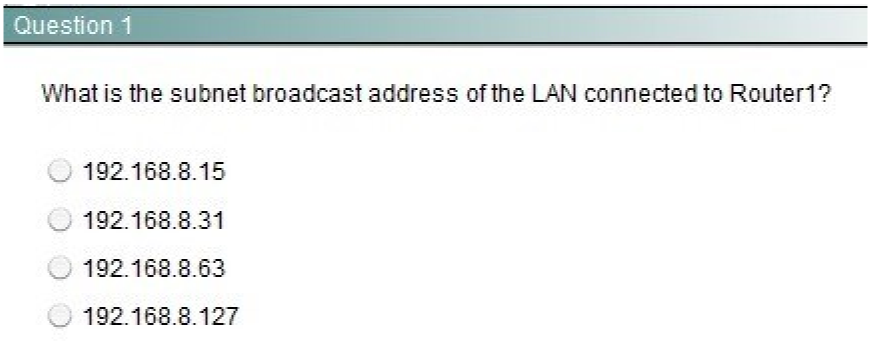
NOTE: The show running-configuration and the show startup-configuration commands have been disabled in this simulation.

To access the multiple-choice questions, click on the numbered boxes on the right of the top panel.

There are 4 multiple-choice questions with this task. Be sure to answer all 4 questions before leaving this item.



```
Press RETURN to get started!
Router1>
```

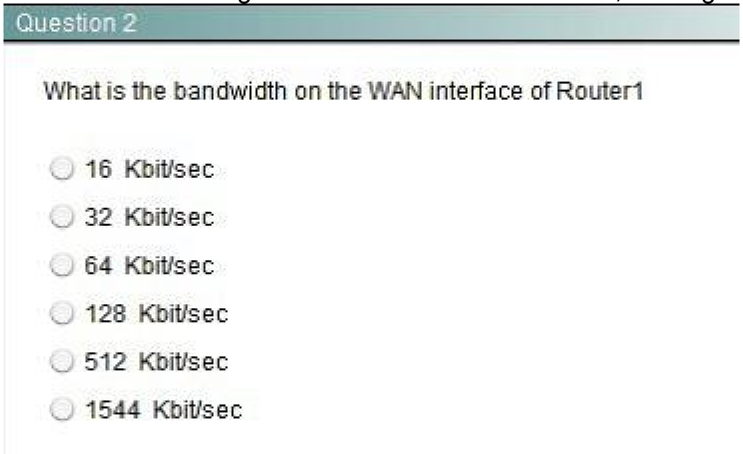


Question 1

What is the subnet broadcast address of the LAN connected to Router1?

○ 192.168.8.15
○ 192.168.8.31
○ 192.168.8.63
○ 192.168.8.127

Answer: 192.168.8.15
Explanation:
The IP address assigned to FA0/1 is 192.168.8.9/29, making 192.168.8.15 the broadcast address.

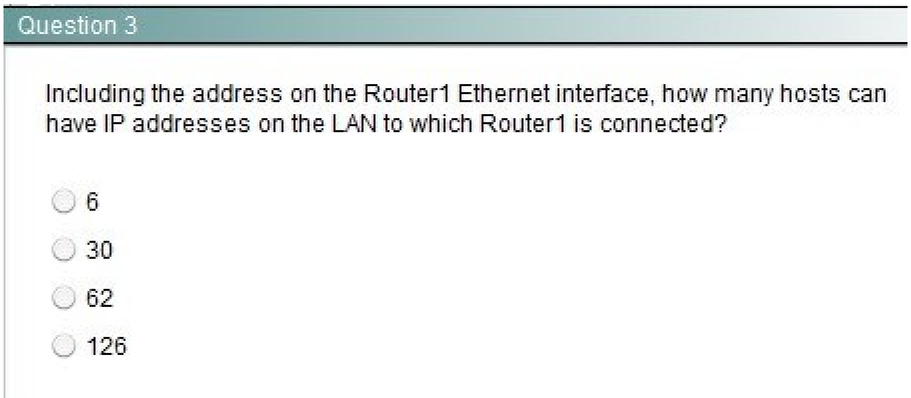


Question 2

What is the bandwidth on the WAN interface of Router1

○ 16 Kbit/sec
○ 32 Kbit/sec
○ 64 Kbit/sec
○ 128 Kbit/sec
○ 512 Kbit/sec
○ 1544 Kbit/sec

Answer: 16 Kbit/sec
Explanation:
Use the “show interface s0/0” to see the bandwidth set at 16 Kbit/sec.

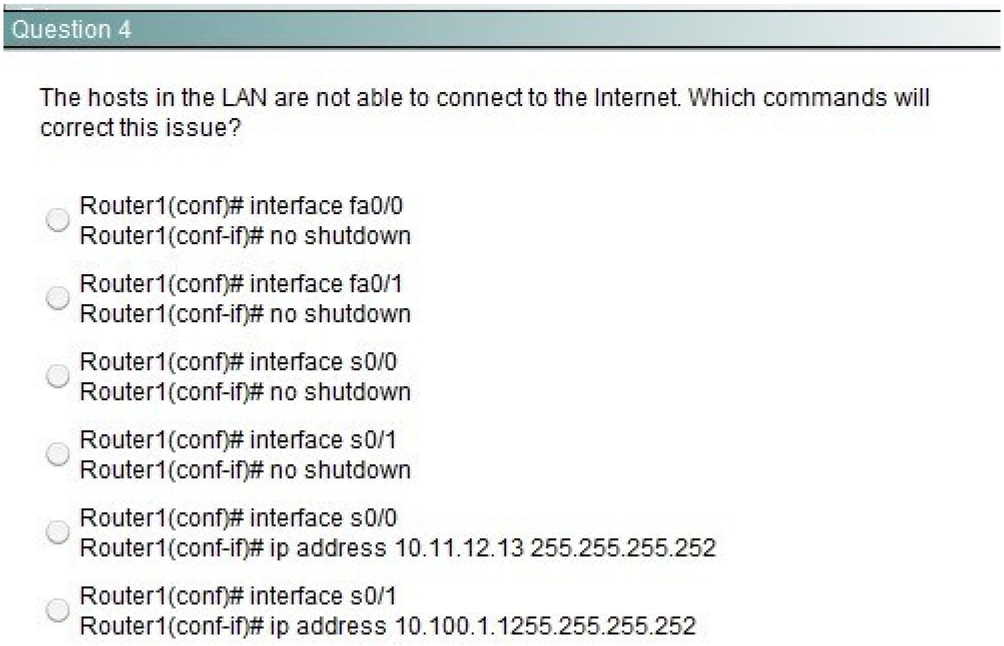


Question 3

Including the address on the Router1 Ethernet interface, how many hosts can have IP addresses on the LAN to which Router1 is connected?

○ 6
○ 30
○ 62
○ 126

Answer: 6
Explanation:
This is a /29 address, so there are 6 usable IP’s on this subnet.



Question 4

The hosts in the LAN are not able to connect to the Internet. Which commands will correct this issue?

○ Router1(conf)# interface fa0/0
Router1(conf-if)# no shutdown

○ Router1(conf)# interface fa0/1
Router1(conf-if)# no shutdown

○ Router1(conf)# interface s0/0
Router1(conf-if)# no shutdown

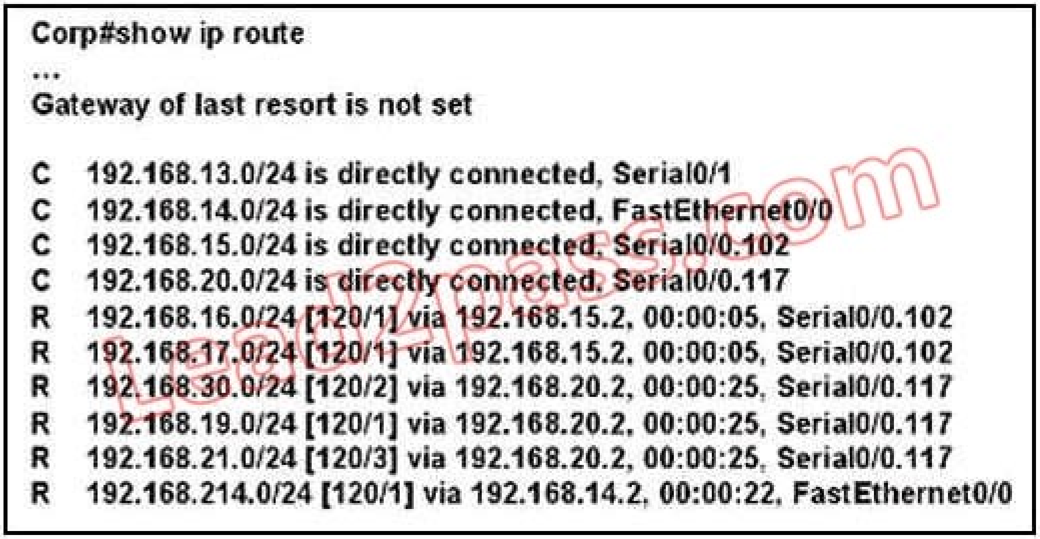
○ Router1(conf)# interface s0/1
Router1(conf-if)# no shutdown

○ Router1(conf)# interface s0/0
Router1(conf-if)# ip address 10.11.12.13 255.255.255.252

○ Router1(conf)# interface s0/1
Router1(conf-if)# ip address 10.100.1.1255.255.255.252

Answer: Router1(conf)# interface fa0/1
Router1(conf0if)# no shutdown
Explanation:
Do a “show ip int brief” and you will see that Fa0/1 has an IP address assigned, but it is shut down.

QUESTION 100
Refer to the output of the corporate router routing table shown in the graphic.
The corporate router receives an IP packet with a source IP address of 192.168.214.20 and a destination address of 192.168.22.3. What will the router do with this packet?



```
Corp#show ip route
...
Gateway of last resort is not set

C   192.168.13.0/24 is directly connected, Serial0/1
C   192.168.14.0/24 is directly connected, FastEthernet0/0
C   192.168.15.0/24 is directly connected, Serial0/0.102
C   192.168.20.0/24 is directly connected, Serial0/0.117
R   192.168.16.0/24 [120/1] via 192.168.15.2, 00:00:05, Serial0/0.102
R   192.168.17.0/24 [120/1] via 192.168.15.2, 00:00:05, Serial0/0.102
R   192.168.30.0/24 [120/2] via 192.168.20.2, 00:00:25, Serial0/0.117
R   192.168.19.0/24 [120/1] via 192.168.20.2, 00:00:25, Serial0/0.117
R   192.168.21.0/24 [120/3] via 192.168.20.2, 00:00:25, Serial0/0.117
R   192.168.214.0/24 [120/1] via 192.168.14.2, 00:00:22, FastEthernet0/0
```

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A. It will encapsulate the packet as Frame Relay and forward it out interface Serial 0/0.117.
B. It will discard the packet and send an ICMP Destination Unreachable message out interface FastEthernet 0/0.
C. It will forward the packet out interface Serial 0/1 and send an ICMP Echo Reply message out interface serial 0/0.102.

D. It will change the IP packet to an ARP frame and forward it out FastEthernet 0/0.

Answer: B